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June 9, 2006

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Ms. Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th street, SW, Room TW-A325
Washington DC 20554

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JUN - 9 2006

Federal Communications Commission
Office of Secretary

Re: EB Docket No. 04-296
Emergency Alert Systems
EX PARTE

ORIGINAL

Dear Ms. Dortch:

On June 8, 2006, on behalf of Cingular Wireless LLC, ("Cingular") Jim Bugel, Vice President-Federal Government Affairs and National Security Policy; and Kris Rinne, Chief Technical Officer met with Ken Moran, Gregory Cooke and Bonnie Gay of the Office of Homeland Security; Timothy Peterson; Walter Johnston and Paul Marrongoni of the Office of Engineering and Technology; Maureen McLaughlin, Sherille Ismail and Robert Cannon of the Office of Strategic Planning and Policy Analysis. In this meeting, Cingular discussed the issues in the above-referenced proceeding. The discussion was consistent with Cingular's comments and reply comments which were filed on January 24th and February 23, 2006 respectively.

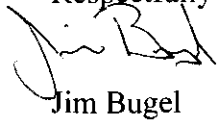
Cingular's presentation summarized its evaluation of technologies for wireless support of emergency alert services. From Cingular's view, there is no existing technology deployed or is available for near-term deployment that will support a comprehensive, mass consumer wireless emergency alert service. Nonetheless, in the short term, Short Message Service ("SMS") is a widely available technology which may allow for a near-term, interim solution for a limited number of recipients of alert messages. The presentation reviewed the advantages and disadvantages of a sort-term SMS approach to emergency alerts.

Cingular emphasized that service requirements must be defined before long-term technology choices can be made. Cingular recommended that the Commission initiate a joint government and industry effort for the definition and architecture of the wireless component of the emergency alert service. Specifications for a wireless component to the emergency alert service need to be developed first, followed by the development and testing of solutions and then deployment. Cingular understands the importance of providing emergency alerts, as well as the need for an efficient comprehensive emergency alert service. Cingular welcomes the opportunity to work in partnership with industry and government in the development and deployment of emergency alert capabilities.

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If you have any questions concerning notice, please contact the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jim Bugel", is written over the typed name.

Jim Bugel
Vice President-Federal Government Affairs
and National Security Policy

Attachment

Cc: Ken Moran
Gregory Cooke
Bonnie Gay
Timothy Peterson
Walter Johnston
Paul Marrangoni
Maureen McLaughlin
Sherille Ismail
Robert Cannon



Executive Briefing on Wireless Emergency Alert Service

June 8, 2006

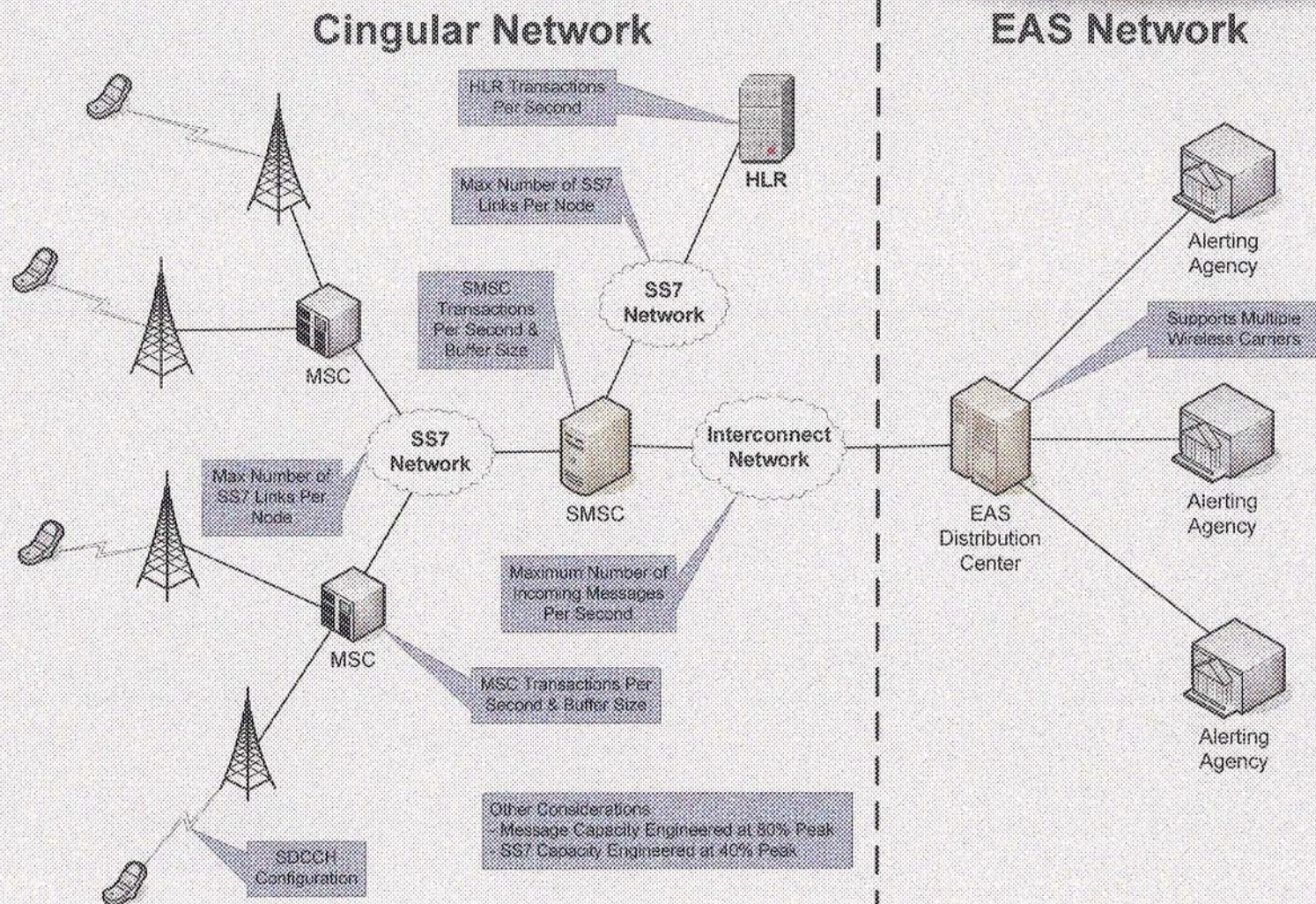
x cingular
raising the bar™

- In the short term, no technology exists (currently deployed or available for near-term deployment) to support a wireless emergency alert service
 - The “silver bullet” for supporting a comprehensive Wireless Emergency Alert Service is currently undefined
- Cingular has evaluated at least 11 technologies
- Cingular has been a participant in the FEMA NCR Pilot
- There are issues that need to be addressed in addition to the technology

Cingular SMS Study

- Cingular has studied the use of SMS for an emergency alert system
 - Concluded that an SMS-based emergency alert system has significant limitations
 - Network congestion, message delivery delays, security issues, and lack of geographic specificity
 - For all but the smallest number of subscribers, message delivery times can exceed 1 hour & may require multiple hours for delivery
 - Delays are primarily network based, not air interface based
 - SMS-based emergency alert service does not scale to a nationwide emergency alert service or to any scenario which would involve a large number of users
 - SMS is not geographically based

Possible Areas of SMS EAS Congestion



What Could Cingular Support Short-Term

- Cingular sees potential for SMS to provide an emergency alert service on an interim basis for key messages (e.g., Presidential level messages) preferably to a small set of users, such as key emergency management personnel, or alternatively to consumers on an opt-in basis
- An interim SMS-based EAS service that is:
 - Voluntary for the carrier with liability coverage
 - Must be limited in size as to not exceed the ability to deliver the alert message in a single SMS message (160 characters) to the consumer
 - “ALERT HURRICANE EVACUATION TUNE TO LOCAL RADIO, TV OR NWS FOR DETAILS”
 - Best Effort Delivery, i.e. no guarantee of delivery or delivery time
- SMS-based EAS will not meet all desired emergency alert service requirements

SMS Summary

- If the Commission desires an SMS-based EAS solution, it must be realized that the SMS-based solution is only an interim solution that will not scale to support a large number of customers, and delivery of SMS-based alert messages can experience significant delays (measured in hours)
- The Commission should also review the global investigations of the use of SMS for emergency alerts, such as
 - Pacific Wave '06 (<http://www.prh.noaa.gov/ptwc/exercise06/>)
 - Finnish Communications Regulatory Authority Working Group Report on Use of Text Messaging in Public Safety Alerts, September 2005
 - SMS over SS7, NATIONAL COMMUNICATIONS SYSTEM TECHNICAL INFORMATION BULLETIN 03-2, December 2003
 - ETSI TR 102 444 V1.1.1 (2006-02), Analysis of the Short Message Service (SMS) and Cell Broadcast Service (CBS) for Emergency Messaging applications
 - “Exploiting Open Functionality in SMS-Capable Cellular Networks”, Enck, Traynor, McDaniel, La Porta – Pennsylvania State University, CCS '05, November 7-11, 2005, Alexandria, VA

- Cingular has not reached a conclusion on the best technologies for the long-term solution since service requirements are currently undefined
- However, Cingular has concluded that broadcast technologies provide the greatest promise for the comprehensive support of a wireless component for the emergency alert service
 - That does imply that the receipt of the message is unconfirmed
 - Will discuss the current state of these potential solutions in next few slides
- Service requirements & Use Cases must be defined before long-term technology choices can be made
 - Joint government & industry venture

Non-Technical Issues Must Also Be Addressed

- Issues that are not purely technical must also be addressed by government concurrently with technology requirements:
 - Who authenticates and warrants the messages to be sent
 - Who defines how large EAS messages are shortened to fit into the wireless delivery technology
 - Who defines the geographic scopes (counties, PSAPs, townships, etc.)
 - Limitation of liability
 - Funding

Cell Broadcast Service

“State of the Union”

- No U.S. Operator has deployed Cell Broadcast Service (CBS)
- CBS has not been tested, validated, or implemented in Cingular's handsets or network today
 - CBS menus are not visible to users
 - CBS potentially has significant issues with battery life, which will have negative impact on the user experience
 - Originally designed around the customer controlling what broadcast information they receive, not the operator
 - Is developed at some level in Cingular's 4 GSM suppliers – but there are differences in the development in terms of what it supports, so would require modification to conform to the specifications
 - Has not been developed in Cingular's 2 UMTS suppliers – but standards are defined
- Significant testing required if CBS enabled
 - Both conformance to specification AND the impact to untested existing deployed devices

CBS Deployment

- Once the requirements for EAS-based CBS are known, it would take at least 24 months to deploy
 - Longer if CBS standards need to change to support EAS-specific requirements
- CBS would require carrier investment
 - Updates to infrastructure
- CBS will require new handsets to consumers
 - Several years to get these out to the consumers
 - Customers will be required to buy a new handset

- CBS is a limited technology
 - Text support only
 - May not address all use cases, e.g. push down of maps
 - Will require special modifications for the visually impaired, such as a special alert tone
- 3GPP proposed to remove CBS from the “System Architecture Evolution”
 - Carriers, especially those in Asia and Europe objected, so it's in there for now

“State of the Union”

- Multimedia Broadcast Multicast Service (MBMS) is a new technology which provides multimedia broadcast capabilities
 - Very little field experience on a worldwide basis
 - Not actually developed on any of Cingular's GSM or UMTS suppliers today
- Further analysis of MBMS is required to determine the spectral efficiency impacts to the network and to the user experience
 - Could have a significant difference in spectrum requirements vs CBS, which in turn could effect capacity available for first responders
- Implementation of MBMS
 - Will impact many network elements,
 - Will require new handsets (never been done before on ANY handset)
 - Initial deployments are likely to be in urban areas only
 - May not be implemented in all handsets (i.e. lower end handsets may not initially have MBMS)
 - Lower end handsets would not have the associated “multimedia” support – faster processors, display types, etc.
- Standards available, but need to incorporate emergency alert capabilities
- Costly to deploy (many network elements impacted) and new functionality for both device and infrastructure
- Once the requirements for EAS-based MBMS are known, it would take at least 36 months to deploy
 - Longer if significant MBMS standards need to change to support EAS-specific requirements

- CBS and MBMS are both technologies that can, in theory, support a scalable, geographic based Emergency Alert Service
 - Each technology has it's pros and cons, and associated costs for deployment
 - These pros/cons must be evaluated against the service requirements
 - Both CBS and MBMS require new handsets
- Cingular is evaluating which of these technologies might best support an alert service
 - But this requires clear service descriptions and requirements before a choice can be made

Steps For

- Policymakers and mobile network operators must work together closely to develop EAS requirements that can reasonably be met by mobile wireless networks
 - Don't mandate a technology for Wireless Emergency Alerts
 - Requirements will impact cost and time to solution
- Follow the Wireless Priority Service model
 - Joint Government-Industry Partnership
- Expectations for a Wireless component of the Emergency Alert Service need to be developed first
 - Use Cases
 - Requirements
 - Timelines

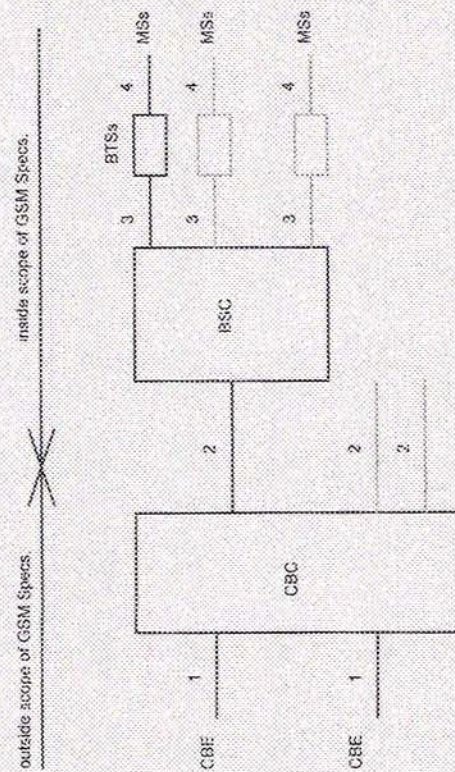
Steps For

- Based on the expectations, the industry needs to look at available technologies to decide the best way to support the expectations
- Any decision to incorporate mobile wireless networks as a component of EAS must take into account the time needed to develop and implement technology choices
- Cingular understands the need for an effective, comprehensive emergency alert service and is ready to work in partnership with the FCC

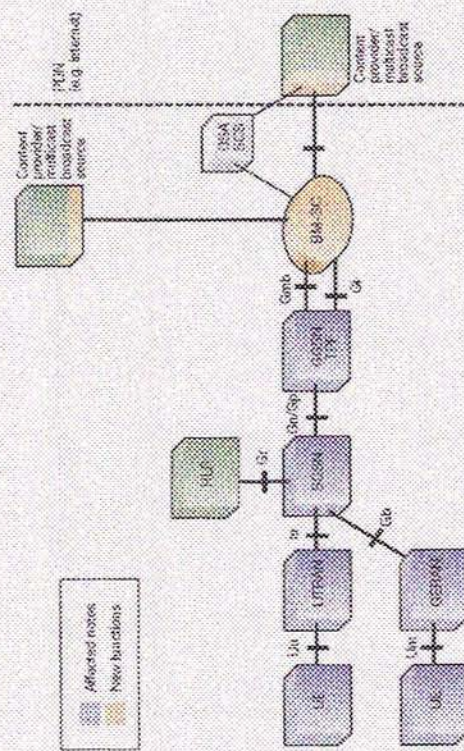
Appendix

Implementation Comparison Affected Nodes

Cell Broadcast



MBMS



What About Geo-location SMS-based E

- Several proposals to provide geographic specificity for SMS have been circulating
- This is continuing to utilize a “store and forward” architecture for a service that is focused on broadcast
- These target the geo-location issue, but do not address other issues mentioned
 - Some proposed geo-location methods actually increase the latency and congestion issues as they add more signaling traffic to an already congested network
 - Handset GPS-based geo-location requires SMS messages to be delivered to mobile, then the mobile decides if the customer is in the target area
 - Latency and congestion still an issue